

## *Health Consultation*

# Long Painting Company: Review of Approved Notice of Construction Application 7582. Seattle, King County, Washington

November 23, 1999

Revised contact information September 19, 2003

**Prepared by  
The Washington State Department of Health  
Under a Cooperative Agreement with the  
Agency for Toxic Substances and Disease Registry**



## **FOREWORD**

The Washington State Department of Health (DOH) has prepared this Health Consultation in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is part of the U.S. Department of Health and Human Services and is the principal federal public health agency responsible for health issues related to hazardous waste. This Health Consultation was prepared in accordance with methodologies and guidelines developed by ATSDR.

The purpose of this Health Consultation is to identify and prevent harmful human health effects resulting from exposure to hazardous substances in the environment. The Health Consultation allows DOH to respond quickly to a request from concerned residents for health information on hazardous substances. It provides advice on specific public health issues. DOH evaluates sampling data collected from industrial sites, determines whether exposures have occurred or could occur, reports any potential harmful effects, and recommends actions to protect public health.

For additional information or questions regarding DOH, ATSDR or the contents of this Health Consultation, please call the Health Advisor who prepared this document:

Washington State Department of Health  
Site Assessment Section  
Office of Environmental Health Assessments  
P.O. Box 47846  
Olympia, WA 98504-7846  
Phone: (360) 236-3370  
Fax: (360) 236-3383  
Toll free: 1-877-485-7316  
Web site: [www.doh.wa.gov/ehp/oehas/default.htm](http://www.doh.wa.gov/ehp/oehas/default.htm)

## **Background and Statement of Issues**

In conjunction with a public hearing on October 12, 1999, the Puget Sound Clean Air Agency (PSCAA) has asked for comments on the proposed Order of Approval for new equipment at the Long Painting Company. PSCAA reviewed Notice of Construction (NOC) Application No. 7582 and determined that all requirements were met and the new equipment should be approved. The approved new equipment includes one baghouse and two Dry Filter System Spray Coating Booths. PSCAA is seeking specific comments on the ambient impact analysis and State Environmental Policy Act (SEPA) determination of nonsignificance for NOC 7582. This health consultation presents comments on the Order of Approval for NOC 7582, the associated SEPA review, and the ambient impact analysis. Particular attention is given to those aspects of the documents that address the protection of human health.

### ***Site Background***

Since 1972, the Long Painting Company headquarters have been located at 8025 10<sup>th</sup> Avenue South, in Seattle, Washington. Long Painting has expanded its property to include several lots on nearby streets in the South Park neighborhood of Seattle. These areas are used predominantly for equipment and material storage, as well as truck maintenance. Long Painting is a commercial painting company that works primarily on large structures. Although over 90% of their work (painting) is done outside of South Park, painting, sandblasting, and zinc metallizing do occur on-site.<sup>1</sup>

Long Painting has eight operational paint sheds in South Park.<sup>1</sup> Two booths are also used for sandblasting and have associated baghouses (used to collect dusts when sandblasting occurs). These spray booths and baghouses are operated under permits from PSCAA. PSCAA also conducts regular inspections at this site as part of the permit process. Long Painting has a Synthetic Minor Emissions permit which limits their emissions to up to 24 tons of any combination of Hazardous Air Pollutants (HAPs) during any consecutive 12 month period. Emissions of any single HAP is limited to 9.9 tons/year. Xylene emissions are limited to nine tons in a consecutive 12 month period.<sup>2</sup> Emissions predominantly include volatile organic compounds (VOCs) that are found in paints and solvents.

During a site inspection on July 10, 1998, a PSCAA inspector noticed that two unpermitted spray booths and one unpermitted baghouse were being used by Long Painting. Long had not submitted a NOC for this equipment and was informed of this requirement during the inspection. On September 14, 1998, an application for a NOC was submitted to PSCAA. PSCAA received what they determined to be the necessary documents on April 26, 1999.<sup>3</sup> The application that is being reviewed in this Health Consultation, for NOC 7582, is for this equipment. The two spraybooths and the baghouse have been used by Long Painting since July 1998.

## *Community Concerns*

Members of the South Park community are very concerned about the impacts that emissions from Long Painting may be having on their health.<sup>4</sup> Long Painting has three paint sheds and one blastbooth/baghouse located at their south fenceline.<sup>1</sup> Adjacent to this southern property line are residential houses on S. Southern Street. Residential houses are also located directly south of Long Painting on 10<sup>th</sup> Avenue South. Within one block, on all sides of Long Painting's property, there is residential housing.<sup>1</sup>

On June 23, 1999, DOH held an availability session in South Park to collect community concerns from area residents. Approximately 33 residents shared their concerns about Long Painting.<sup>4</sup> The majority of these residents live within a three block radius of Long Paintings property. Their complaints were about noise, noxious odors, and particulate matter that they believe are coming from Long Painting. Some neighbors notice strong odors weekly, while for other neighbors the odors are more sporadic, occurring only a few times a month. These odors can last from minutes to hours. Many complain that the odors are strongest at night and in the evenings. At least four residents are concerned about the potential for an explosion or fire at Long Painting; they worry about the storage of hazardous materials. Residents that attended the availability session believe that the particulate matter, odors and associated toxic effects are the cause of many, if not all, of their adverse health problems. Some residents worry that lead paint is in the air and soil on their properties and throughout the neighborhood as a result of sandblasting and painting activities at Long Painting. Symptoms and illnesses that the residents repeatedly reported to DOH included: dizziness, nausea, headaches, coughing, wheezing, frequent nosebleeds, feeling sick, difficulty breathing, a metallic taste in the mouth upon waking, sinus problems, tearing eyes, red eyes, and asthma and other respiratory problems in adults and children.<sup>4</sup> In general, the residents that spoke with DOH employees are very concerned about the neurological, developmental and respiratory effects that pollutants from Long Painting may be having on the children that live and play in the area.<sup>4</sup>

Some of the community members are also upset about how their quality of life has been impacted by Long Painting.<sup>4</sup> At times, due to noise, irritating odors, and related health concerns, they are unable to spend time in their yards maintaining and enjoying their property. These interferences are especially disturbing to the residents during the evening hours and on weekends when they are not working.

A review of files at PSCAA show similar community concerns.<sup>5,6</sup> Residential complaints of odor are documented going back to 1979. The first complaint of overspray to nearby houses was made in early 1981. Since that time there has been a consistent stream of complaints relating to odors, overspray, and dust. The air agency has followed up on many of these complaints and there are records of PSCAA inspections at the Long Painting facility.<sup>6</sup> Multiple citations for emissions violations have also been issued and over the years Long Painting has worked with PSCAA to improve their control technologies and housekeeping.<sup>6</sup> Despite increased emission control technologies at Long Painting, there are still complaints from residents regarding odors, overspray, dust, and noise. Recently, DOH employees witnessed a Long Painting employee scattering dust, with what appeared to be an airhose, outside of a sandblasting booth.<sup>7</sup> This practice led to the release

of noticeable amounts of dust into the air from the facility.

## Discussion

PSCAA has proposed the approval two new spray coating booths and one baghouse at the Long Painting South Park facility. The approval of the new equipment is based on ambient air analysis conducted by PSCAA using Long Painting's emissions inventory data. Restrictions and conditions of the approval include a requirement that Long Painting use best management practices, and maintain and follow a complaint response plan.

The approval of this equipment is also based upon the determination that the new equipment will not have a probable significant adverse impact on the environment (determination of nonsignificance). The determination of nonsignificance, through the State Environmental Policy Act (SEPA) review process, is based upon an environmental questionnaire that was filed by Long Painting and reviewed by PSCAA.

Below are specific concerns and discussion regarding changes that DOH suggests addressing before approval and a final determination of nonsignificance are granted to Long Painting.

1. PSCAA has determined that under SEPA Rules, the two new spray coating booths and new booth for abrasive blasting (the baghouse) will not have probable significant adverse impacts on the environment. As a result, a determination of nonsignificance was issued by PSCAA. DOH has some questions regarding responses provided by Long Painting when filling out the environmental checklist that was required for SEPA review. Specific concerns that DOH would like to see addressed are listed below:
  - a. Section B.1.c: *Property soil classification*. Long Painting replied that the soils on the site are industrial zoned.<sup>8</sup> According to documents on file at PSCAA, and conversations with DCLU employees, the Long Painting property is zoned industrial buffer and Long Painting has a non-conforming use permit. ***Please examine whether or not the fact that this is a buffer zone, with a non-conforming use permit, will affect the permitting of expanded industrial activities on-site.***
  - b. Section B.2.a: *Air Emissions*. When responding to questions asking about air emissions, Long Painting stated that the new equipment would not result in any air emissions.<sup>8</sup> DOH believes that the painting and sandblasting processes that will occur in the two new spraybooths and new baghouse will most likely result in the emission of VOCs and metals. Review of community complaints show that the some of the surrounding residents may be impacted by dust and VOC odors from present activities at Long Painting.<sup>6</sup> Additional air emissions of VOCs and metals could lead to potential adverse health effects. ***Please explain how the new equipment will not result in any air emissions.***

- c. Section B.7.b.2: *Noise*. Long Painting stated that noise would come from ventilation fans and that it would be at or below 60 decibels at the adjoining property.<sup>8</sup> Long Painting did not respond to the section of this question that asked about hours that noise could be expected. Please provide this information. ***In addition to being a nuisance, there is a concern that excess noise could have detrimental health effects. DOH would also like to be assured that appropriate monitoring is conducted to confirm that the noise levels will in fact be below 60 decibels.***
  - d. Section B.8.a: *Current site and adjacent properties*. Long Painting stated that the site is industrial, as are properties to the north. Properties to the south are listed as residential.<sup>8</sup> Please note that properties to the east and west are also residential.<sup>1</sup> ***Where there is a mix of residential and industrial uses, changes in use, such as on-site expansions, could have potential adverse health effects on nearby residents.*** DOH would like ensure that residential neighbors, on all sides of the facility, are considered.
  - e. Section B.12.b&c: *Impacts on recreation activities*. Long Painting stated that no recreational uses would be displaced and that the project would not impact recreational uses.<sup>8</sup> The Duwamish Waterway park is located directly across the street from Long Painting on 10<sup>th</sup> Avenue South.<sup>1</sup> Based on complaint records on file at PSCAA and concerns voiced to DOH employees, the new equipment at Long Painting may impact recreational use at the park. Complaint records suggest that noxious odors and dust believed to be emanating from Long Painting have forced nearby residents to stay indoors.<sup>4-6</sup> Increased industrial practices, including the addition of new equipment that will allow increased on-site work, may have adverse impacts on air quality at the nearby park. ***DOH is concerned that the new equipment may adversely impact use of the park by community members.***
2. According to NOC 7582, under SEPA review it is stated that the Department of Construction and Land Use (DCLU) did not require any additional building or mechanical permits.<sup>3</sup> It is explained that no change-of-use permits are required if booths are located in buildings established for manufacturing uses. According to a phone conversation between Long Painting and PSCAA, Building 6 (where the new spraybooths are located) has been on the property since Long Painting took ownership and has always been designated as industrial manufacturing.<sup>9</sup> Building 10, where the new baghouse is located “is a tent and is new.”<sup>9</sup> DOH is unclear as to why this building is referred to as a “tent.” If this building is in fact new, then shouldn’t a building permit be required? The notes from the phone conversation state that Long Painting will send a site-plan to DCLU for evaluation.<sup>9</sup> After examining documents on file at PSCAA for NOC 7582, it is unclear as to whether or not additional building permits are required.<sup>3</sup> Since PSCAA is the lead agency for the SEPA review, DOH recommends that PSCAA confirm that Long Painting has obtained all the necessary permits. ***Additional industrial uses on this property could have potential adverse health impacts on the neighborhood.***

3. As stated in the Notice of Public Hearing: “As part of the SEPA review and the ambient impact analysis requirements, Long Painting Co. has submitted an analysis that demonstrates emissions from the new equipment will not have a probable significant adverse impact on the environment, particularly concerning odors and toxic air contaminant emissions. PSCAA is seeking specific comments on this analysis and on our determination of nonsignificance.”

DOH has examined ambient impact analysis that have been conducted by PSCAA.<sup>3</sup> The examined analyses are part of the NOC 7582 worksheets. DOH has some specific concerns and questions regarding the analyses. They are listed below.

- a. For the metallizing/blasting baghouse, a 99.98% efficiency is assumed.<sup>3</sup> According to technical information from the equipment supplier, as provided by PSCAA, the gravimetric filter efficiency is greater than 99.99%. Please explain how the gravimetric efficiency would translate into an efficiency based on concentration and particle numbers. According to the supplier, effective baghouse efficiency depends upon the specifics of the filter system as it is in place on-site.<sup>10</sup> Have tests been conducted on site, with the new baghouse, to determine that the removal efficiency is 99.98%? If the efficiency is closer to 98.0%, then the amount of dust released would be significantly higher.

Analysis shown for the baghouse is based on using 70 pounds of zinc per day to account for the shot blast that is used.<sup>3</sup> ***How does PSCAA account for metals (such as lead, chromium, zinc, and cadmium) that are present in the paint that is being removed from equipment?*** If Long Painting knows how much dust is collected in the baghouse each day, then based on baghouse efficiency, it would be possible to determine the amount of fugitive dust released to the environment. Analysis of metals present in baghouse dust could be conducted to determine the quantity of metals released to the environment. DOH would like to see this analysis. As the community has concerns regarding the release of fugitive dust from blasting at Long Painting,<sup>4,5</sup> it is important to be able to quantify the amount and composition of the dust that is released.

- b. According to PSCAA inspection reports for Long Painting, the Synthetic Minor Permit places limits on the Hazardous Air Pollutants (HAPs) that Long Painting may emit (less than 24 tons HAPS per year).<sup>2</sup> The NOC 7582 worksheet, in Section D.2.a., states that they are limited to 25 tons per year of Toxic Air Contaminants (TACs).<sup>3</sup> ***Please clarify exactly which pollutants/contaminants are regulated by the synthetic minor permit.*** To be most protective of human health, DOH recommends that the limit apply to TACs.
- c. The ambient impact analysis given in section G examines toluene, xylene, methyl isobutyl ketone (MIBK), and methyl ethyl ketone (MEK).<sup>3</sup> This type of analysis is not complete. For instance, does PSCAA know the amount of hazardous metals, such as chromium and lead, that are released during the painting process? Although

the actual levels may be less than the VOC emissions, due to their high toxicities, it is important to evaluate the ambient emissions of these toxic air contaminants. ***DOH recommends that an ambient impact analysis for metals is required before an approval order for the NOC is granted.***

- d. DOH is concerned that the additive effects of using more than one spraybooth in a given period may result in exceedances of Acceptable Source Impact Levels (ASILs). For instance, for the ambient impact analysis for toluene in the NOC 7582 worksheet, assuming that Shed 6 is used for only two hours per day, as stated by Long Painting, emissions are 4.8 fold below the ASIL.<sup>3</sup> Long has at least eight operational spraybooths and if four of these are being used simultaneously, the ASIL could easily be exceeded. It is reasonable to assume that these conditions could occur and thus the subsequent air emissions may reach unacceptable levels that may cause adverse health impacts. Similar exceedances would also be seen for xylene and MIBK.

For this health consultation DOH requested calculations based on the combined emissions from all spraybooths. This information was not provided by PSCAA as DOH was told that it was beyond the initial scope of the present hearing (relating to NOC 7582).<sup>11</sup> ***The additive effects that may result from the concurrent usage of multiple spraybooths is critical information that should be examined in order to determine whether or not the addition of two new spraybooths will result in adverse health impacts.***

- e. Long Painting has stated that they used each spraybooth for approximately two hours per day.<sup>3</sup> Based on this analysis, the most conservative ambient impact analysis should use emissions factors for each spraybooth that are based upon a two hour day, not a 24-hour emission rate. ***DOH recommends that the impact analysis use the most realistic emissions information.***
4. Although Long Painting has maintained and operated a complaint response plan and hotline in the past, comments from community members suggest that this system has not functioned well.<sup>4-6</sup> Community concerns should go directly to the regulating agencies (PSCAA), and not to Long Painting. By relying on Long Painting, the community is left without an official record of their concerns.
5. DOH is concerned that good housekeeping and best management practices may not be regularly practiced at Long Painting. As discussed in the introductory section of this health consultation, DOH employees have witnessed poor housekeeping at the Long Painting facility.<sup>7</sup> A review of documents on file at PSCAA show a repeated trend of poor housekeeping practices, followed by a citation or notice of violation from PSCAA.<sup>6</sup> It is anticipated that if Long Painting improved housekeeping and management practices, there would most likely be a decrease in community concerns regarding potential health effects due to noxious odors, dust, and noise attributable to Long Painting. ***DOH recommends stricter enforcement of housekeeping and best management practices.***



6. Long Painting has operated unpermitted equipment at its South Park facility for periods lasting over one year. In the case of this NOC, construction was completed in June 1998 and the permit application was not submitted until September 1998.<sup>3</sup> Although final approval has not yet been granted, this equipment has been operational.<sup>3</sup> ***DOH is concerned that the permitting process may not protect human health as it appears to allow for the operation of unpermitted equipment.*** DOH recommends Long Painting obtain the necessary permits before construction and operation of new equipment. Operation should not occur until a permit is issued.
7. As additional information regarding Long Painting and air emissions inventories become available, DOH would appreciate the opportunity to conduct further evaluations. If local agencies decide that further sampling, monitoring, and /or modeling are required to better understand and characterize releases from Long Painting, DOH would like to provide comments on these plans and evaluations.

## Conclusions

DOH does not support the determination of nonsignificance that was granted by PSCAA. At the writing of this health consultation, current information does not exist to allow DOH to make health-based determinations that would support the approval of the current NOC. The levels of TACs and HAPs, including VOCs and metals, that are released during painting and sandblasting activities on-site at Long Painting are not known in sufficient detail. A more thorough analysis of ambient air impacts is required. The history of community complaints and substantial amount of community concern regarding emissions, in the form of noxious odors and dust support the necessity for PSCAA, and DOH, to have more specific knowledge of the types of emissions that are currently resulting from activities at Long Painting.

DOH is also concerned that the SEPA review process may have been deficient. Although Long Painting will be applying the Best Available Control Technologies (BACT), there is still a concern that the technologies will not be sufficient to protect neighboring residents. The Long Painting site is unique in that it is located in an industrial buffer zone that is adjacent to residential housing. There should be a mechanism through which the effects of activities upon adjacent land uses, specifically residential housing, can be addressed. Currently PSCAA does not address the issues of adjacent land uses. In this case, DOH believes that this type of evaluation is necessary to protect the health of residents.

Finally, the complaint response plan is inadequate. Residents have voiced complaints stating that they feel as though their concerns are not being heard by local agencies. The tracking of complaints should be the responsibility of the local air agency. If these complaints go directly to industry, then the private citizens will not have an official record of their concerns.

## **Recommendations**

1. A more thorough ambient impact analysis is necessary before the order of approval for NOC 7582 is granted. This analysis should include metals and should examine any additive effects that may result from the simultaneous use of multiple spraybooths. Detailed emissions inventories from Long Painting will be necessary for this evaluation.
2. A more stringent evaluation of SEPA responses should be conducted before a determination of nonsignificance is granted.
3. Stricter enforcement of housekeeping and best management practices is recommended.
4. Consideration should be given to modifying the complaint response plan so that it will provide for an official record of community complaints.

## **CERTIFICATION**

This Health Consultation for the Long Painting Company was prepared by the Washington State Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.

---

Technical Project Officer  
Superfund Site Assessment Branch (SSAB)  
Division of Health Assessment and Consultation (DHAC)

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this Health Consultation and concurs with its findings.

---

Richard E. Gillig, M.C.P.  
Chief, SPS, SSAB, DHAC, ATSDR

## **References**

- 1.** Site Visit to Long Painting and conversations with Mike Cassidy and John Carlson. May 12, 1999.
- 2.** PSCAA, Inspection reports for Long Painting, as present in Long Painting files and given to DOH by Melissa McAfee, May 1999.
- 3.** PSCAA, Long Painting files, Worksheet for NOC 7582, provided by David Lenington, October 1999.
- 4.** DOH Public Availability Session, meeting with South Park residents, June 23, 1999.
- 5.** PSCAA, Long Painting Complaint Files, 1979 to present.
- 6.** PSCAA, Long Painting Files, 1979 to present.
- 7.** DOH site visit to Long Painting, June 23, 1999.
- 8.** SEPA, Environmental Checklist for Long Painting Company, from PSCAA files, filed by Brian Vance of Long Painting, August 29, 1998.
- 9.** PSCAA Telephone Use Report, filed by David Lenington, in NOC 7582 Application File,, summary of conversations with Molly Hurley (DCLU) and Brian Vance (Long Painting), February 1999.
- 10.** DOH conversations with John Wilson, Farr Tenkay representative, regarding pollution control devices, October 8, 1999.
- 11.** DOH correspondence with David Lenington at PSCAA, received by email on October 4, 1999.